How to Create a Domain Controller

Overview

This guide will show you how to enhance your network's security and management capabilities by demonstrating how to promote a Windows Server to a Domain Controller (manually and through a script), then finish by showing you how to tie it to a Windows device (manually and through a script).

Prerequisites

- One Windows server
- One Windows PC

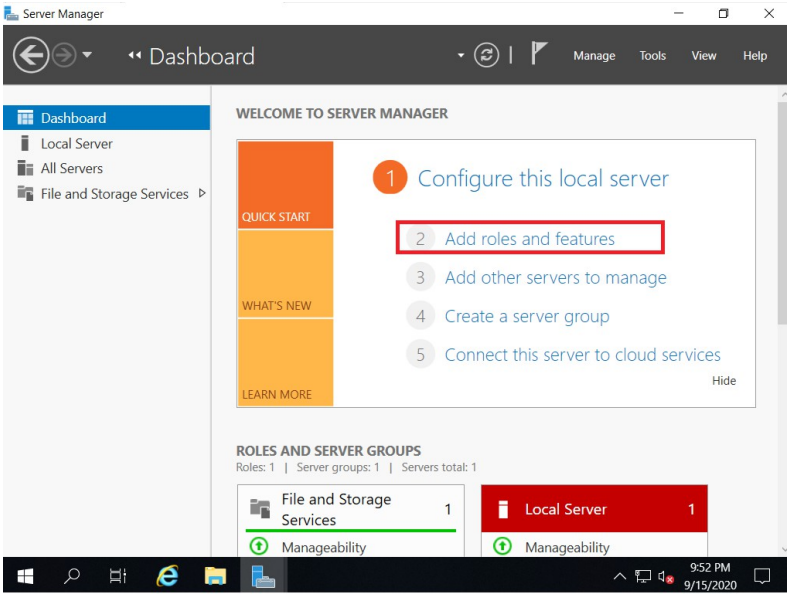
Contents

- How to Turn Your Windows Server into a Domain Controller.....2
- How to Turn Your Windows Server into a Domain Controller (with PowerShell).....10
- How to Join a Windows PC to Your Domain.....11
- How to Join a Windows PC to Your Domain (with PowerShell}.....14

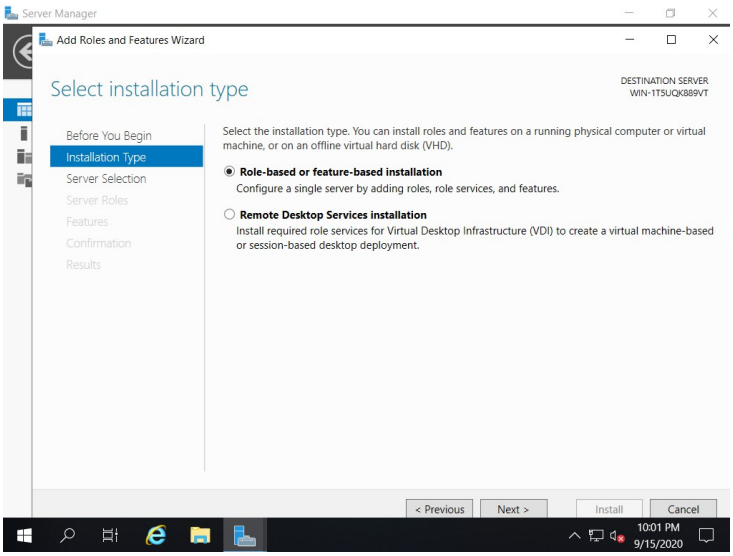
How to Turn Your Windows Server into a Domain Controller

Step 1: Log on to the server.

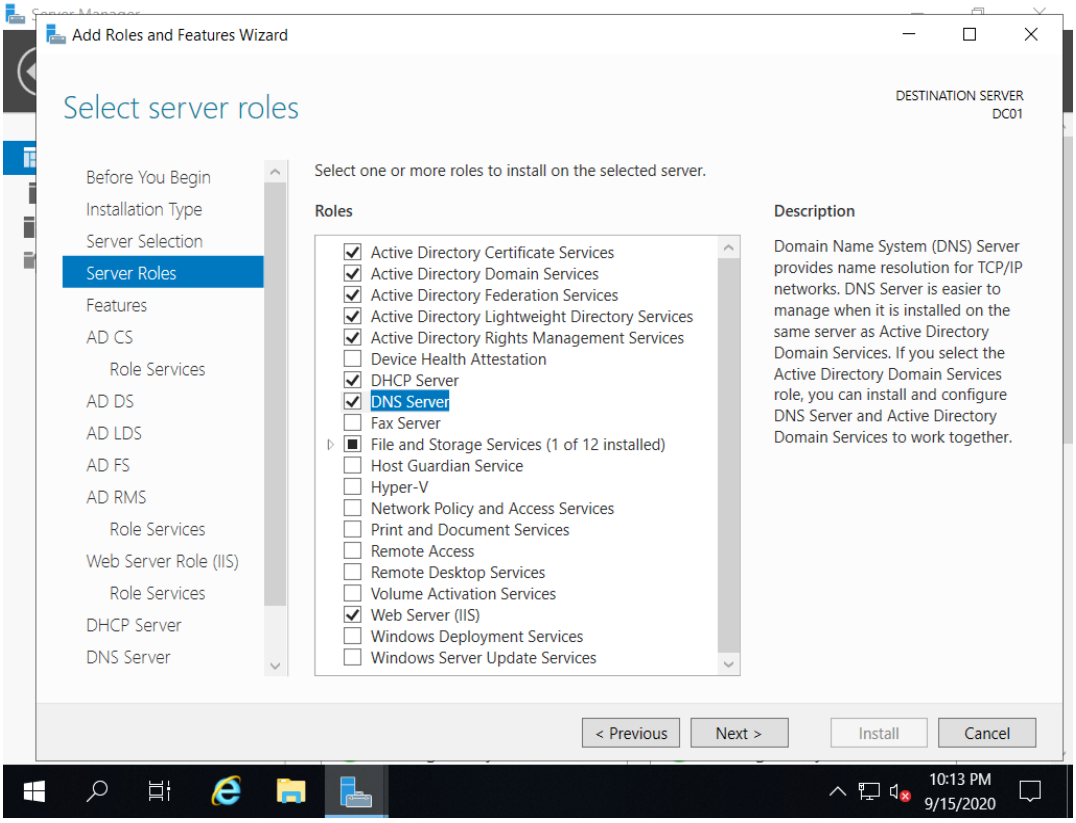
Step 2: Open Server Manager and click the “Add roles and features” button on the right side of the screen.



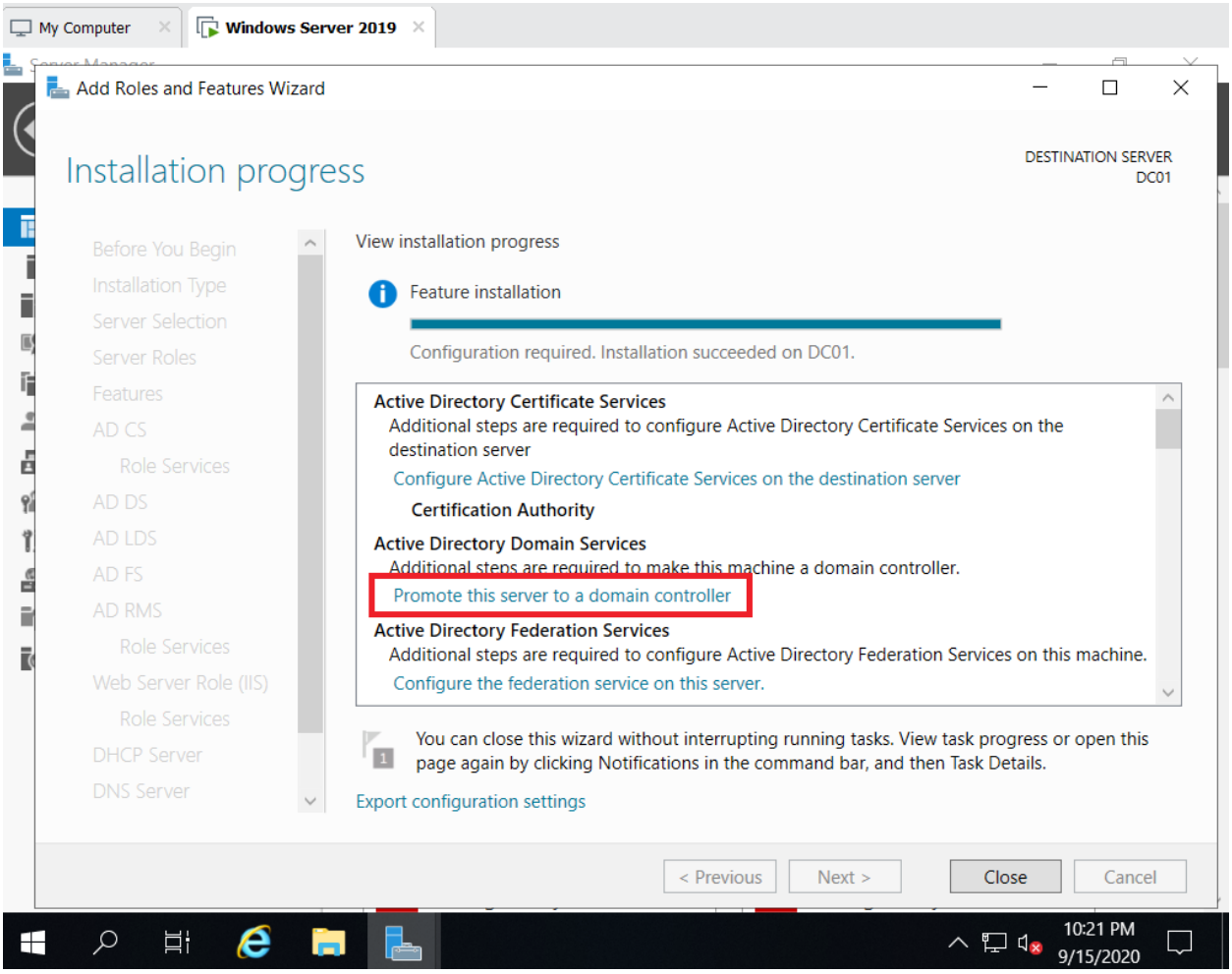
Step 3: Select Role-based or feature-based Installation.



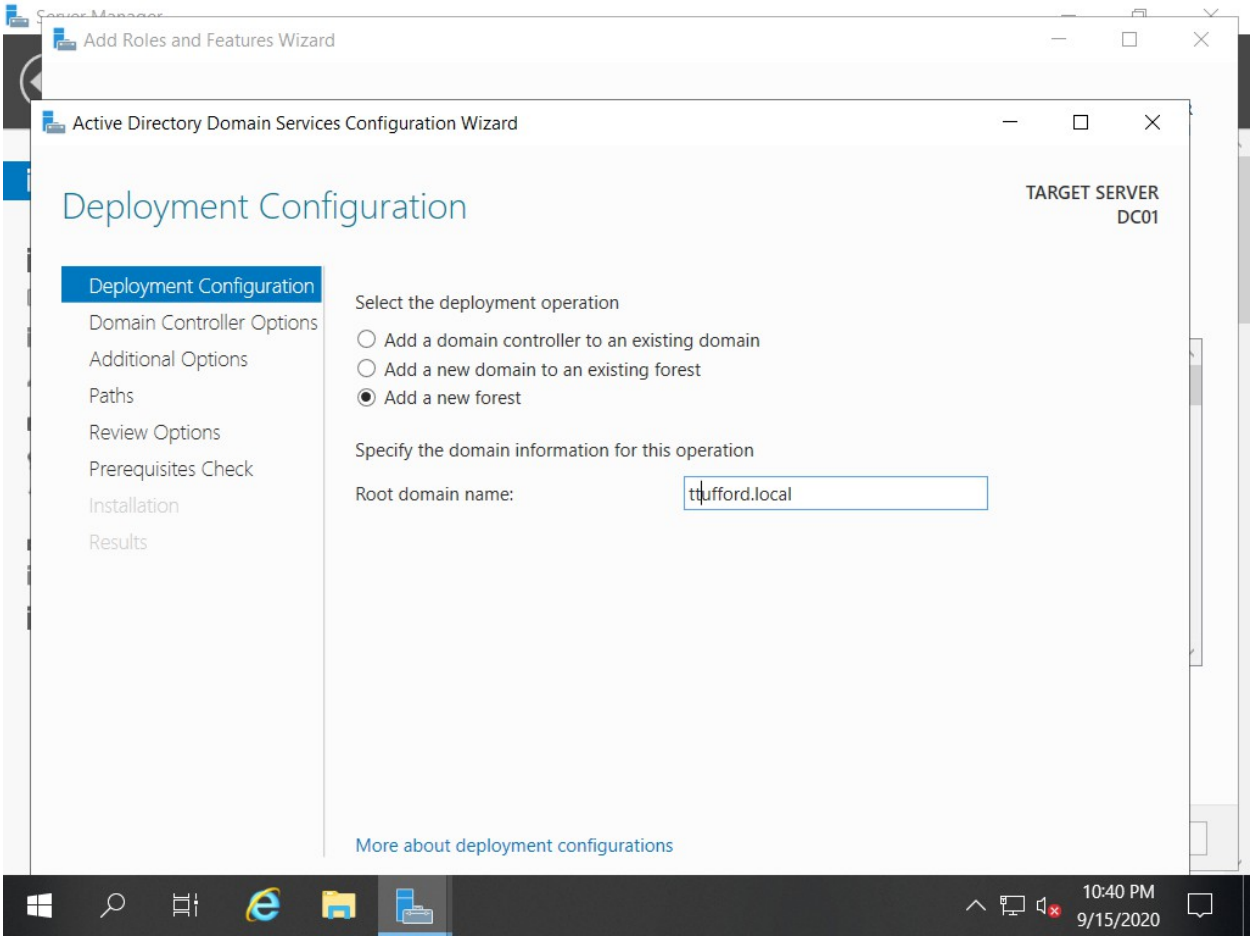
Step 4: Select the roles in the image below, then press next.



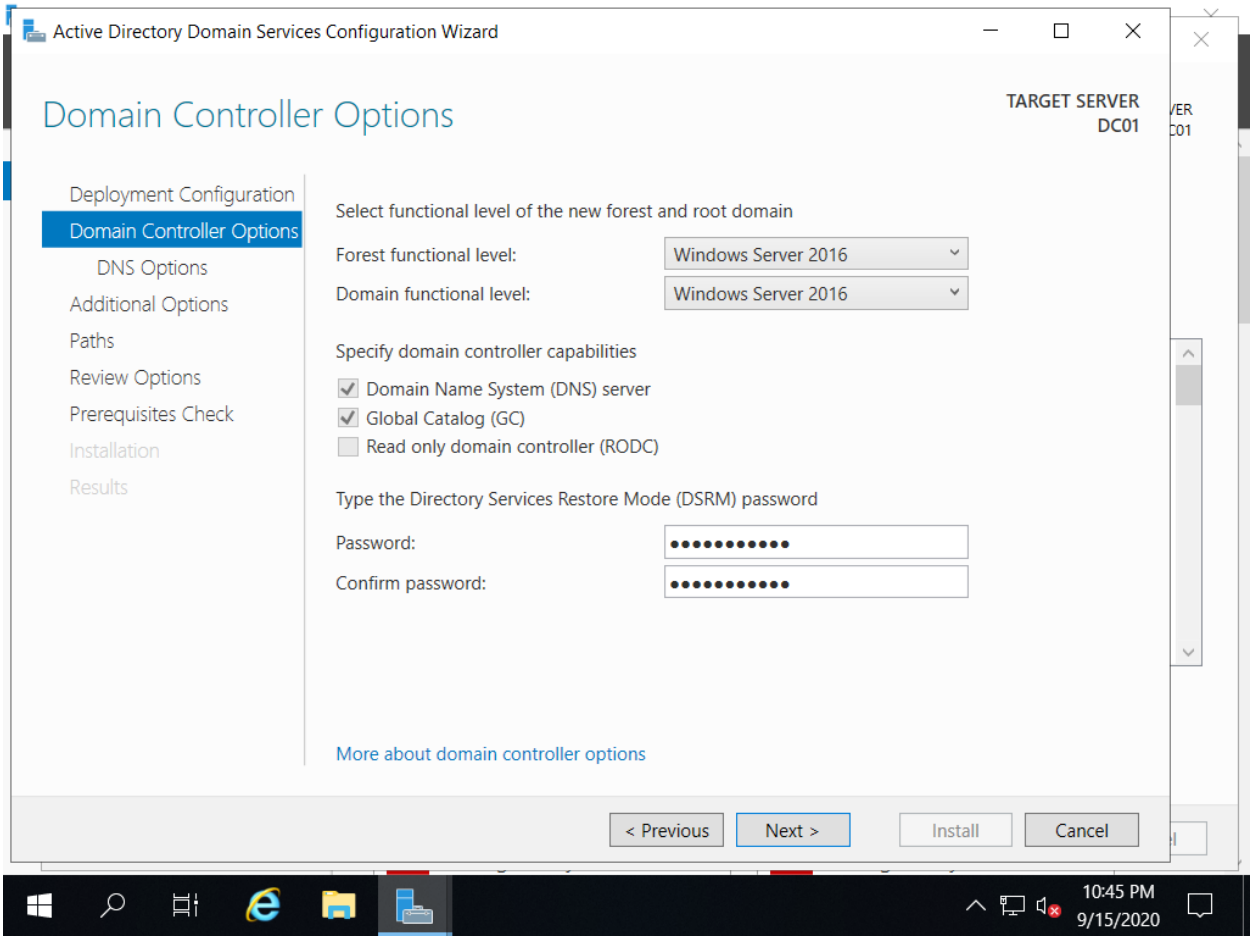
Step 5: Wait for the features to install, then click the option to “Promote this server to a Domain Controller.”


My Computer
Windows Server 2019
Add Roles and Features Wizard
Installation progress
DESTINATION SERVER
DC01
Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD CS
Role Services
AD DS
AD LDS
AD FS
AD RMS
Role Services
Web Server Role (IIS)
Role Services
DHCP Server
DNS Server
View installation progress
Feature installation
Configuration required. Installation succeeded on DC01.
Active Directory Certificate Services
Additional steps are required to configure Active Directory Certificate Services on the destination server
Configure Active Directory Certificate Services on the destination server
Certification Authority
Active Directory Domain Services
Additional steps are required to make this machine a domain controller.
Promote this server to a domain controller
Active Directory Federation Services
Additional steps are required to configure Active Directory Federation Services on this machine.
Configure the federation service on this server.
You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.
Export configuration settings
< Previous
Next >
Close
Cancel
10:21 PM
9/15/2020

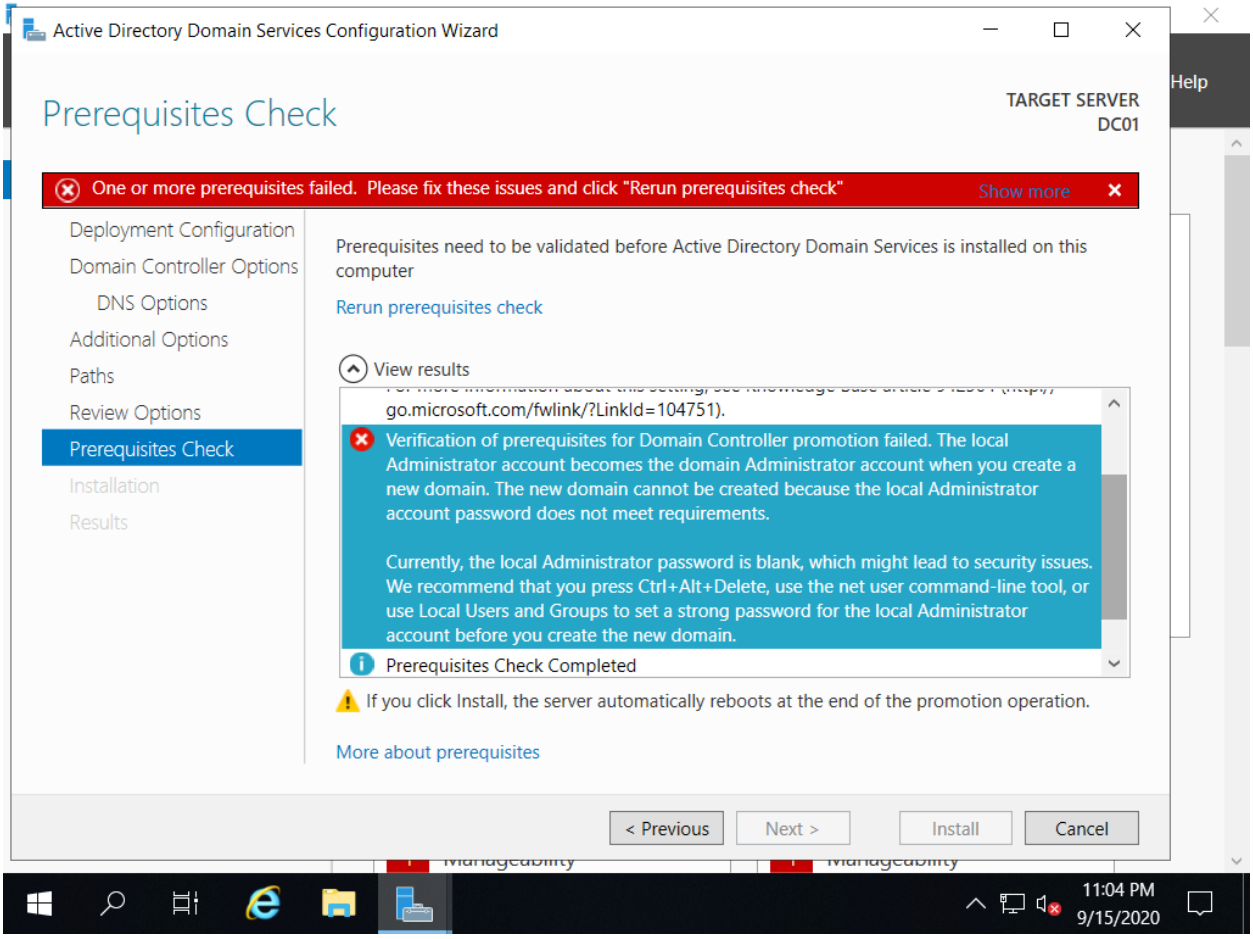
Step 6: Next, you will be directed to the Active Directory Domain Services Configuration wizard. Type the name of your domain in the box on the bottom, then press next.



Step 7: Then, specify DNS and GC capabilities by checking the boxes. Afterward, you will be asked to enter your password and press next.



Step 8: Next, you will be taken to the Prerequisites Check section. You might not be able to proceed until you do a bit of troubleshooting. The result below states that I do not have a password under my administrator account.



Step 9: If you had the exact same error:

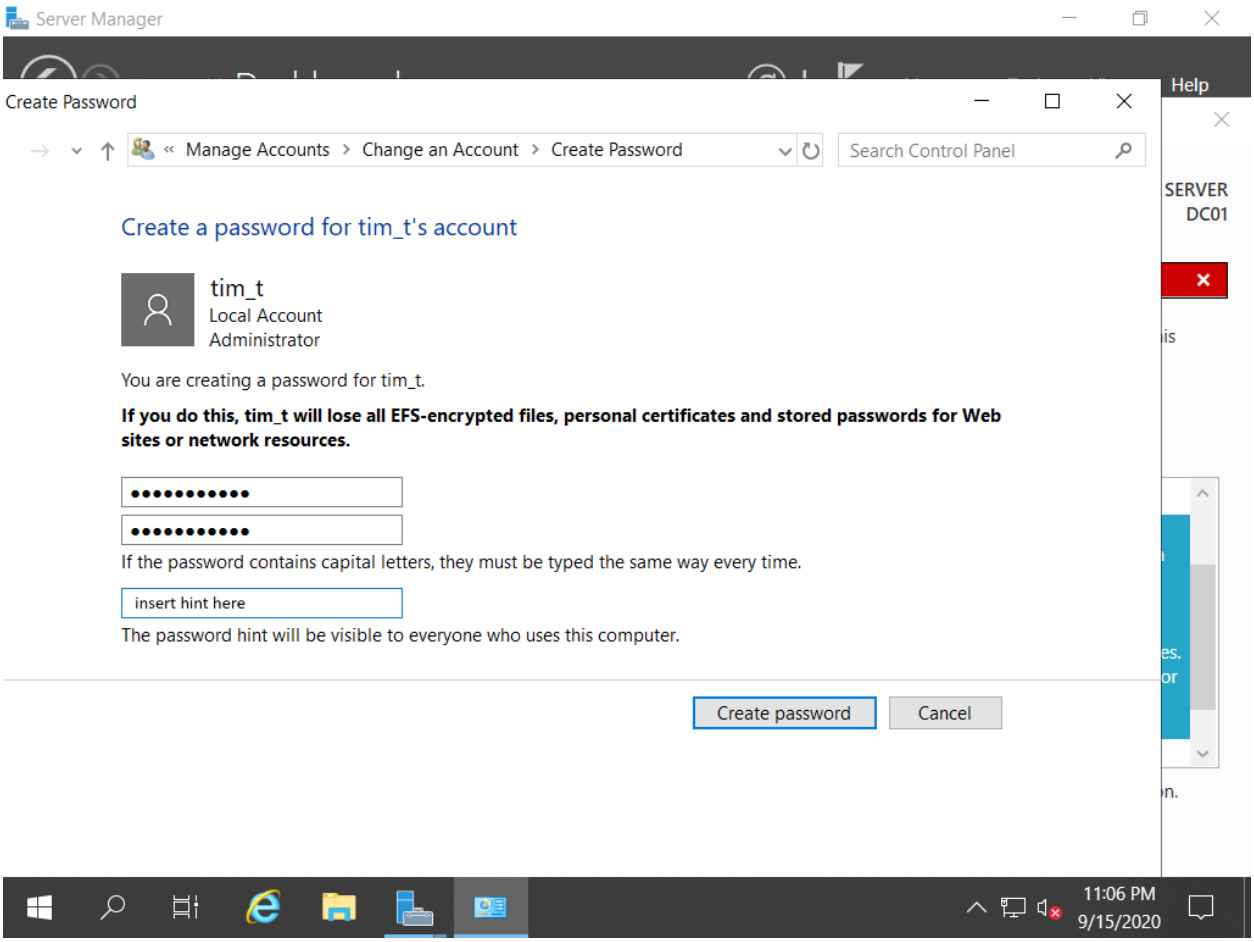
a. Go to the Control Panel.

b. Click Manage Accounts.

c. Click Change an Account.

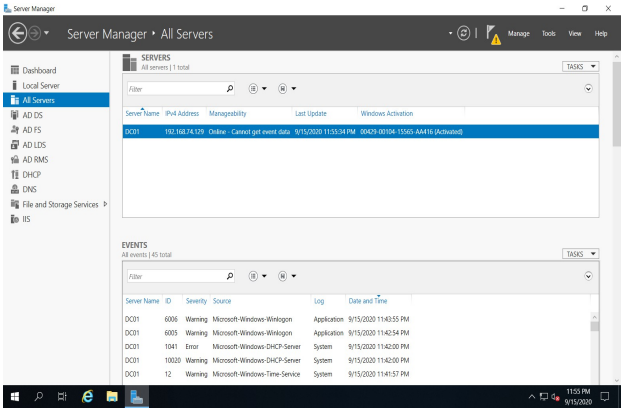
d. Then, click Create Password.

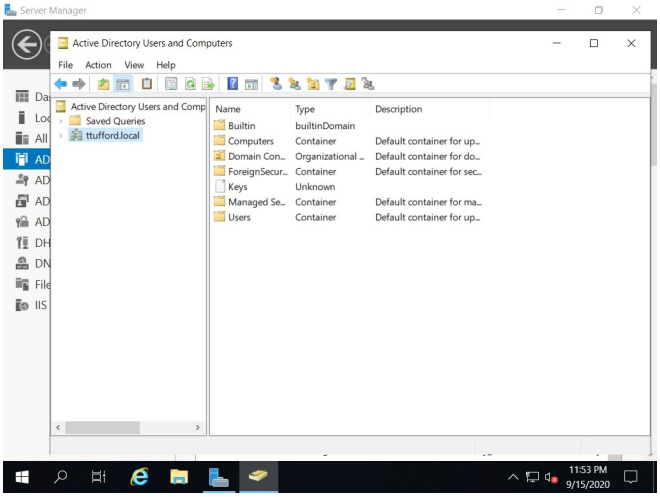
I also had to restart the server for the changes to take place. Afterward, I was able to pass the prerequisite test.



Step 10. Validate that you can open the installed services.

Below are screen shots of Server and Events and Active Directory Users and Computers.





How to Turn Your Windows Server into a Domain Controller (with Powershell)

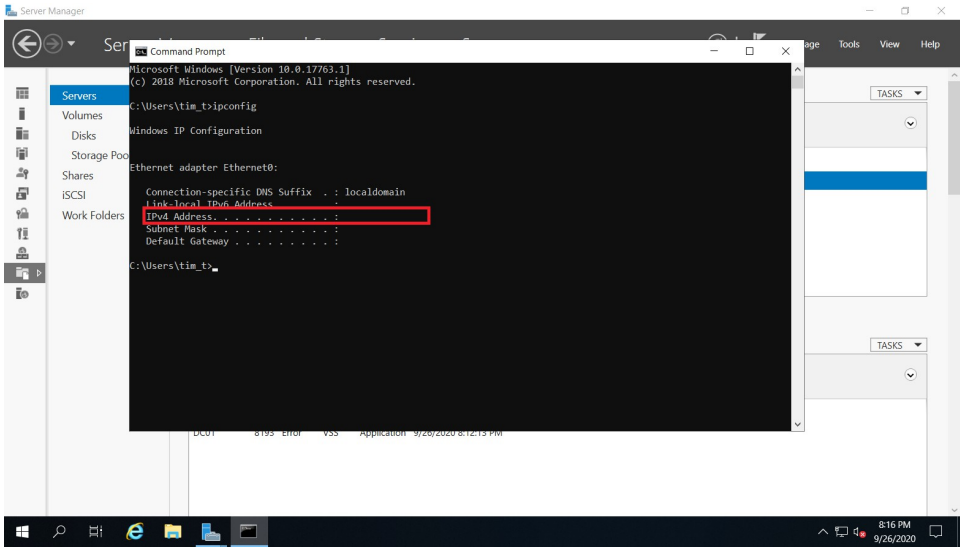
```
 # If you run this script, it will repeat all the actions above


$domainName = Read-Host "Please enter the Domain Name (e.g., example.com)"
$domainNetbiosName = Read-Host "Please enter the Netbios Name (short name for the
domain)"

Import-Module ADDSDeployment
Install-ADDSForest `
-CreateDnsDelegation:$false `
-DatabasePath "C:\Windows\NTDS" `
-DomainMode "WinThreshhold" `
-DomainName $domainName `
-DomainNetbiosName $domainNetbiosName `
-ForestMode "WinThreshold" `
-InstallDns:$true `
-LogPath "C:\Windows\NTDS" `
-NoRebootOnCompletion:$false `
-SysvolPath "C:\Windows\SYSVOL" `
-Force:$true
```

How to Join a Windows PC to Your Domain

Step 1. First, get the IP of your server by opening the Command Prompt, typing ipconfig, then pressing enter.



Note: Your server needs to stay turned on for the rest of these steps to work.

Step 2. a. Next, log in to your Windows PC.

b. Then, open the Control Panel.

c. Click Network and Internet.

d. Click Network and Sharing Center.

e. Click Network Settings.

f. Then, click on Ethernet0.

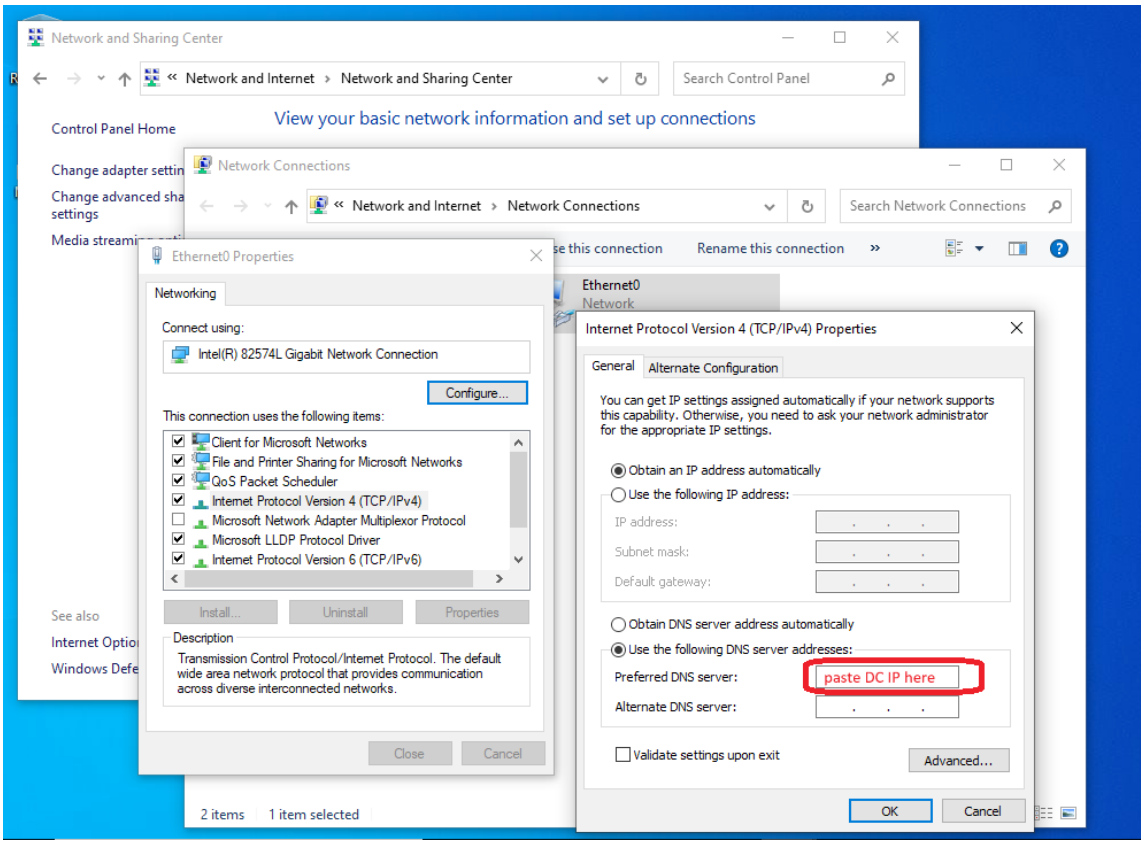
g. Next, right click.

h. Select Properties.

i. Click IPV4.

j. Select Properties again.

k. Then, type in the IP from Step 1 like so:



Step 3. a. Next, open the Control Panel.

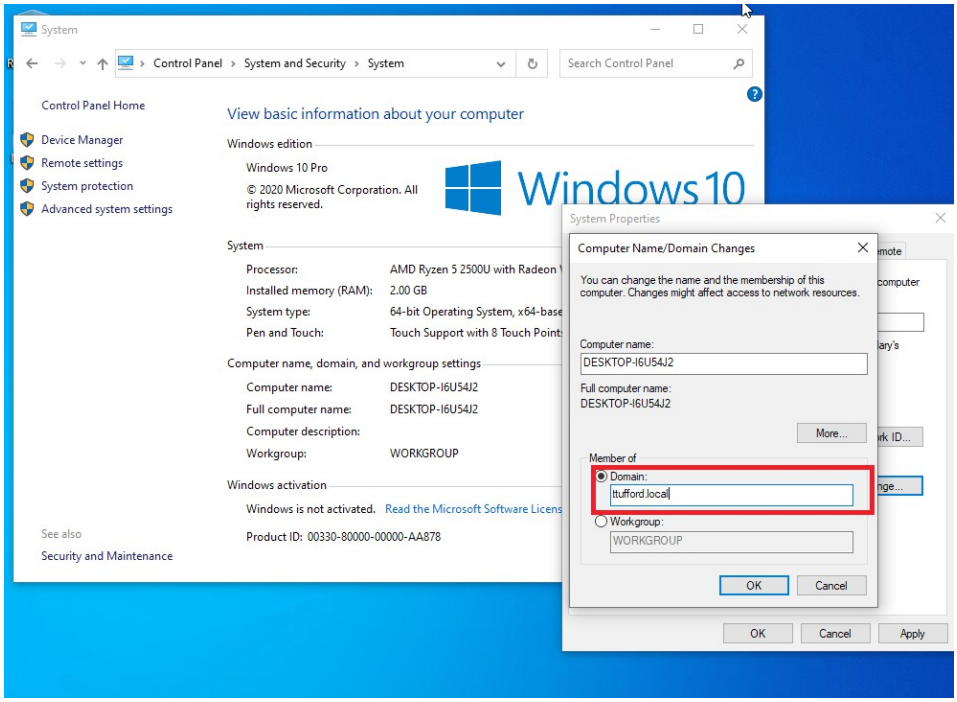
b. Select System and Security.

c. Click System.

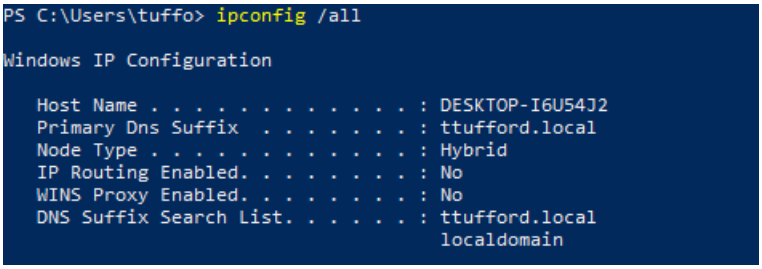
d. Click System Properties.

e. Then, click Change.

f. In the resultant window, add the name of your domain into the box. You will be asked to restart afterword.



Step 4: Open PowerShell, then run the following command to validate whether or not this device has been joined to the domain: ipconfig/all.



How to Join a Windows PC to Your Domain (with PowerShell)

```
# If you run this script, it will repeat all the actions in the previous section

$yourDomain = Read-Host "Please enter your domain name: "
$yourUsername = Read-Host "Please enter your username: "
$yourPassword = Read-Host "Please enter your password: "

$domain = $yourDomain
$username = "$yourDomain\$yourUsername"
$password = $yourPassword
$credential = New-Object System.Management.Automation.PSCredential($username,
(ConvertTo-SecureString $password -AsPlainText -Force))

Add-Computer -DomainName $domain -Credential $credential -Restart
```